AIDS Brief

for sectoral planners and managers

Manufacturing Sector

The HIV/AIDS epidemic is a global crisis which demands urgent attention and committed, sustained action by alliances of individuals, organisations and sectors. The AIDS Brief series has been developed to support the conceptualisation and implementation of key sectoral responses. The manufacturing sector is the sector which underpins all the leading global economies. As a major employer of labour and operating as it does in a fiercely competitive environment, the manufacturing sector is vulnerable to the effects of AIDS in multiple ways.

BACKGROUND

Definition of the Manufacturing Sector

Manufacturing is defined as the physical or chemical transformation of materials or compounds into new products.

Facts about the Manufacturing Sector

The word manufacture comes from the Latin words *manus* (hand) and *facere* (to make) though nowdays manufacturing means the making of articles by machinery as well as by hand. Manufacturing industries are usually located where there are natural resources, good transportation, mild climates and large populations.

All manufactured commodities, whether they are consumer goods or producer goods, can be broadly categorised into heavy or light, and durable or non-durable goods, and there are three manufacturing processes:

- *synthetic*, where the mixture of basic ingredients (paint), or the assembly of already manufactured components (vehicles) is involved.
- *analytic*, the breaking down of raw materials into their component parts (gasoline production from crude oil).
- *conditioning*, changing the form of raw materials (ingots from iron ore).

The final price of the product includes the cost of research, design, raw materials, the actual production process, quality control and distribution, marketing and sales, plus profit for the manufacturer, wholesaler and retailer.

Beyond what manufacturing adds directly to GDP through final sales, many goods are produced at the intermediate level for use in producing other goods and services. Manufacturing thus has a strong multiplier effect on the economy. The stimulus of manufacturing on the total activity is greater than that from all other broadly defined sectors of the economy. In the US, a final sale in manufacturing of $1 results in a total increase in output throughout the economy of $2.30, versus $1.62 for services.

About a decade ago mass assembly, based on the production logic of economies of scale, was replaced by priorities such as eliminating direct labour through automation, integrating manufacturing systems with other business functions, continuous process improvements, the elimination of waste and with pursuing competitive advantages through economies of scale. These, in turn, have been superseded by the demands of globalisation and rapid technological change, such as advances in information technology and telecommunications, which accelerate productivity and supply chain integration. The rising sophistication and expectations of customers around the world are giving a primacy to co-ordinating marketing and sales with actual manufacturing. Described as the "Customer Era", customers around the globe are deciding what, when, where and how they will purchase goods and services.

Laws and regulations protect a manufacturer's patents and property and provide legal ways to do business, at times giving loans at low rates of interest, or subsidies. Governments protect domestic industries by levying tariffs on goods imported from other countries.

AIDS AND THE MANUFACTURING SECTOR

Manufacturing is generally the most dynamic part of the industrial sector and the economy, and anything that threatens manufacturing is likely to have a disproportionate effect on the overall economy. HIV/AIDS may be such a threat.

In addition, the centre of gravity of the global economy is irrefutably shifting to emerging markets. Even in the wake of economic turmoil in Asia, economists are still confident that the developing world will command over 65 % of global GDP by 2020. This will coincide with the most significant impact of the HIV/AIDS epidemic.

Labour and Operations

In the US, on average, each $1 million in final sales in manufacturing helps sustain almost 14 jobs - both the jobs to produce the final product and the intermediate products that go into it - and 8.4 jobs in other sectors, such as raw materials and services. Compare this to around 8 jobs in service-related companies. Labour is thus an essential input in the manufacturing sector and any factor which affects the availability, performance, required or available skills or cost of labour will have a direct effect on the operation.

In the event of significant numbers of workers being infected with HIV, productivity will increasingly be affected in both infected and uninfected employees. This could be due to:

- *Morbidity* - the illness of workers resulting in absenteeism (authorised sick leave) or unauthorised absenteeism
- *Other absenteeism* - compassionate leave and funeral attendance
- *Mortality* - the death of workers
- *Poor staff morale* - resulting from fear and uncertainty about HIV/AIDS and the loss of colleagues
- *Disruption in the workplace* - due to increased workloads and discrimination against those believed to be HIV- infected.

Benefits

The costs of the epidemic will be felt throughout the pay-roll, depending on how this is structured.

1) Where the worker is paid a wage for work and makes his or her own provision for health care, pension, insurance and housing (or looks to the state to provide these things), there will be no immediate impact on the company's payroll cost. However, in the longer term, if the state has to bear these costs, either revenue will have to be reallocated or additional revenue raised.
2) Where larger employers provide benefits such as medical care or medical aid, pensions, insurance, housing and death benefits, the costs of these will increase forcing a reappraisal of their costs or a decrease in benefits.

Investments

All manufacturing enterprises require investment to maintain or increase capital stocks. The possible sources for this are either reinvested profits, or money raised through other sources such as banks, financial institutions or stock markets. Local capital may be reduced as assets are used to meet immediate health needs and foreign investors may be sensitive to risks such as the HIV/AIDS situation in countries where investment is contemplated.

IMPACT CHECKLIST

Internal risk profile

- ✓ Are employees particularly susceptible to HIV infection?
- ✓ Are there points in the pre-production (research), production or post-production (sales) processes where the illness or death of key workers will jeopardise the continued viability of the organisation?
- ✓ Are there sources of the necessary skills should workers with these skills be lost due to HIV/AIDS?
- ✓ How will the changing costs of labour (due to AIDS related costs) influence production costs and product costs?
- ✓ What is the potential of the organisation to move towards greater automation to anticipate or compensate for lost workers?
- ✓ How will increased claims on benefits be met (increased benefits costs or decreased benefits available)?
- ✓ Is the workplace HIV/AIDS/STD/TB prevention and management programme optimal in terms of HIV infections prevented and impact mitigated?

External risk profile

- ✓ Is the product an essential or a luxury item and is the market vulnerable to changing levels of disposable income?
- ✓ Who is the 'customer' and will the customer profile change as the HIV/AIDS epidemic intensifies?
- ✓ Is the health and/or social infrastructure adequate to cope with increasing numbers of infected persons (workers and community members)?
- ✓ Is the country in which the organisation is operating perceived to be a poor investment risk as a result of its HIV/AIDS epidemic?
- ✓ How will the effects of the HIV/AIDS epidemic on the country's economy in general affect the organisation?

SECTORAL RESPONSE

The manufacturing sector's response to the HIV/AIDS epidemic should ideally consist of three main components – management strategies, a workplace HIV/AIDS/STD/TB programme and community participation.

Management strategies

Leading manufacturers anticipate change and possess the flexibility to adjust their strategies quickly. As they expand into new markets and confront new competitors, the leaders recognise that they must be able to turn-on-a-dime and react to changes in a highly uncertain environment. HIV/AIDS represents a strategic issue which requires management in precisely the same manner.

Workplace HIV/AIDS/STD/TB programme

Successful workforces are built on skills, teamwork and performance-based compensation systems. AIDS has the potential to undermine all these. The great majority of manufacturers have programmes to train employees to enable them to keep up with the ongoing revolution in high technology. Despite the fact that it requires a radical mind-shift on the part of management and workers – from product-orientated training to people-orientated training, the existing training programmes provide an ideal precedent for a workplace programme for HIV/AIDS prevention, care and support.

Community participation

Disease prevention, health promotion and community participation are not generally considered to be business concerns. The emergence of the HIV/AIDS epidemic has forced a reconsideration of this position and a recognition of the importance of extending initiatives into adjacent communities, sharing scarce resources, developing non-traditional partnerships and utilising opportunities to meet the multiple challenges posed by the epidemic.

Conduct an audit to measure the organisation's current response and to prioritise areas for future action.

ACTION CHECKLIST

STRATEGY AREAS: MANAGEMENT STRATEGIES

ELEMENTS	OVERALL ASSESSMENT			AREAS FOR ACTION	KEY QUESTIONS
	GOOD	AVER-AGE	POOR		
STRUCTURE TO DIRECT THE STRATEGIES					Does a standing structure exist? What is the composition of the structure? What is the mandate of the structure?
HIV/AIDS/STD/TB POLICY Preliminary checklist: - Co-ordination - Management issues - HR issues (recruitment, training) - Prevention programme (awareness, education) - Testing & counselling - Confidentiality & disclosure - Medical issues (wellness, STDs & infection control) - Employee benefits					Does the policy cover all 3 strategy areas? Does the policy cover all workplace programme elements? How was the policy developed? How has the policy been communicated? Has the policy been revised/reviewed?
RISK PROFILE Company Surrounding community					Are factors and dynamics understood such as for example: - separation from primary partners? - basic awareness of HIV/AIDS/STDs? - cultural practices? - use of drugs/alcohol?
IMPACT ASSESSMENT					Have scenarios been developed and described relating to: - production bottlenecks? - employees (morbidity & mortality)? - products & markets? - impact on related sectors? What has been done with this information?
COST ANALYSIS (DIRECT & INDIRECT) - absenteeism & sick leave - morbidity & reduced production - replacement recruitment - retraining - medical costs - disability & ill-health retirement - pensions & dependent benefits - funeral costs					Has a cost analysis: - been carried out? - validated? - repeated?
SKILLS SUCCESSION PLAN					Have critical positions been identified? Can a multi-skilling programme reduce the risk to production?
ANALYSIS OF LEGAL OBLIGATIONS - labour legislation - occupational health and safety legislation - equity legislation					Is the organisation operating in accordance with legislation which has HIV/AIDS implications
DATA COLLECTION AND ANALYSIS					What data are readily available? Can they be used to monitor trends? What other data are needed for meaningful monitoring?
COMMITMENT - by management - by unions					What commitment is demonstrated by: - management? - unions?
LONG TERM STRATEGIES TO REDUCE RISK FACTORS					What is planned to address factors such as: - migration? - long-distance haulage? - other?
ANY OTHER MANAGEMENT STRATEGIES?					

COMMUNITY PARTICIPATION

ASSESSMENT OF POTENTIAL PARTNERS - public sector health and social services - other companies (private sector) - NGOs and CBOs - development & community projects					How does the organisation interact with potential partners?
ASSESSMENT OF AVAILABLE ORGANISATIONAL RESOURCES Preliminary checklist: - marketing - advertising & pr - information technology - market research - other					Who is responsible for identifying resources which can be shared and for liaison with community-based projects?
PARTICIPATION IN COMMUNITY PROJECTS					How does the organisation participate in community projects?
INITIATION OF COMMUNITY PROJECTS					What community projects does the organisation support? What is the potential for these to include HIV/AIDS/STD/TB prevention &/or care elements? Has the organisation initiated any HIV/AIDS/STD/TB specific projects?
SUPPORT FOR NGOs & ASOs					Who is responsible for identifying NGOs and ASOs for support? What could that support entail?
ANY OTHER COMMUNITY STRATEGIES?					

WORKPLACE PROGRAMME

ELEMENTS	OVERALL ASSESSMENT			AREAS FOR ACTION	KEY QUESTIONS
	GOOD	AVER-AGE	POOR		
PROGRAMME IMPLEMENTATION DOCUMENT					How was the document developed? Who is responsible for implementation? What is the budget for the programme?
AWARENESS ACTIVITIES - HIV/AIDS - STDs - TB					How often and how are these activities conducted? What resources are used to support the activities?
PEER EDUCATION					What initial training do peer educators receive? What on-going training &/or support do peer educators receive?
TRAINING OF TRAINERS					Have trainers been trained to run HIV/AIDS/STD/TB training? Is HIV/AIDS/STD/TB training integrated into the organisation's training programme?
CONDOM PROMOTION					How often are condom promotion activities run? What do these activities consist of?
CONDOM DISTRIBUTION					Where and when are condoms available? What is condom uptake? Is there evidence of an increase or decrease in condom use?
TESTING AND COUNSELLING (VCT - voluntary counselling & testing)					Is voluntary HIV counselling and testing available & used? Is there evidence of an increase or decrease in VCT use?
STD MANAGEMENT					Is STD management offered on site? Are HCWs trained in syndromic management? Is there evidence of increased or decreased use of STD services?
INFECTION CONTROL PROGRAMME - equipment - training - procedures for occupational exposure - post-exposure prophylaxis					How is infection control integrated into First Aid training? What controls are in place to ensure universal infection control measures? How many occupational exposures have occurred? What procedures were followed in such cases?
WELLNESS PROGRAMME					What medical interventions are available to HIV-infected employees? How are such interventions monitored?
PROGRAMME MONITORING					What are the indicators of success/progress? How are they measured and to whom are reports made?
ANY OTHER WORKPLACE PROGRAMME ELEMENTS?					

SUMMARY

The manufacturing sector is generally accepted as the most dynamic part of the industrial sector and a critical part of any country's economy (whether developed or developing). HIV/AIDS has the potential to threaten the manufacturing sector at numerous points and in multiple ways. To minimise the effects of the epidemic requires concerted and sustained efforts in areas not traditionally addressed by organisations - efforts aimed at minimising workforce susceptibility and organisational vulnerability. Success will be linked to understanding the current and future profile of the epidemic, measuring its impact within the workplace and on markets, and pooling resources and working in partnership to minimise new infections and mitigate the inevitable results of the epidemic.

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